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THE ROLE OF RURAL GOVERNMENT
IN AGRICULTURAL DEVELOPMENT

by

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Introduction

This paper will examine the actual and potential role of rural government, broadly defined, in promoting agricultural development in low-income countries.

Students of the process of modernization have taken differing positions in regard to the importance of rural governing institutions. On the one hand, the community development approach has placed primary emphasis on providing the requisites of local autonomy to rural communities so that they could play a leading role in determining the course of economic and social progress. On the other hand, over-all development plans, cast in terms of national aggregates, strive to determine the extent and timing of resource allocation among the components of the industrial and agricultural sectors, and, at most, view local government as a means of organization for rural public welfare or, perhaps, as a means for the provision of items of social overhead capital such as feeder roads, rural school buildings, or local irrigation works.

The concept of "rural government" as presented in this paper takes neither of these positions, nor does it specifically attempt to strike a balance between these opposing interpretations. Elements of the argument of this paper are related to these other theories but the approach taken here is of a different nature.

The proposition which this paper will endeavor to support is that government and other non-governmental public institutions operating within rural areas have a crucial part to play in enhancing the speed and nature of agricultural development in low-income countries. The over-all role to be fulfilled by public institutions is a diffuse one that will

differ from country to country. However, the general areas of functional competency or of jurisdiction may be specific for the different kinds of participating institutions. These traits may be described within limits sufficiently narrow to provide a basis for the coordination of the various institutions and for the allocation of resources among them.

Farming is generally looked upon as an individual or private undertaking. In its idealized form, in most countries, the means of production are viewed as being privately owned and as being privately managed in a rational manner toward the maximization of certain goals. Although basically related to an economic activity, agricultural production decisions also have social and political implications for those involved. With some elaboration, this description might characterize the agriculture of industrialized as well as of low-income countries. In the course of economic development, the goals of agricultural production, the techniques of management and the nature of the inputs are expected to change. Yet the fundamental individual or private nature of the process is expected to be preserved.

The rationale of this idealization is that agricultural production depends on the control of hard-to-predict biological processes which are, in turn, dependent on resources which may, themselves, be highly variable. Consequently, the more intimately that management can be associated with day-to-day operations in farming, the more sensitive and effective are decisions likely to be. Also, because of the limited economies of scale in agriculture and because of the problems of incentives to producers, the general experience in those farming areas under public ownership and public management has been such that except under certain unique circumstances attempts at communal, cooperative, collective, state or

joint-farming have had to be justified on political or social grounds rather than on economic grounds.

Although government has little role to play in the actual management of production, this paper will endeavor to demonstrate and explore the roles of the diverse institutions of government which together are in position to provide the indispensable initiative, guidance and facilitation of agricultural development. In order to make this examination, several aspects of the relationships involved will be discussed in turn.

First, there will be a consideration of the technical requisites of agricultural modernization. Providing an adequate agricultural resource base exists, the successful provision of these requisites will determine whether or not the capacity for agricultural development is within the grasp of farmers. That is, these requisites are necessary conditions for agricultural modernization which farmers as individuals cannot provide for themselves from resources directly under their control.

Second, the several aspects of the broadly defined concept of "rural government" will be discussed in regard to their various roles in providing or facilitating the provision of the requisites of agricultural modernization. As will be seen "rural government" as it exists within the horizons of individual farmers is a composite of the structures and activities of a variety of institutions. These institutions range from the official agencies of the national government to customary groups or procedures existing within the framework of traditional society.

These two considerations, the needs of a modernizing agriculture and the public institutions which will provide them, or which will facilitate their provision, form the focus of this paper.

A third section will present observations on current practice in field administration and local implementation of development programs in a selected area in Southeast Asia. These observations will be drawn on to test the proposition stated above and to identify the crucial relationships or factors which, to a large degree, are the determinants of success and failure in government sponsored agricultural and rural development programs.

In view of these determinants of success and failure and in view of the apparent capacities of the different kinds of institutions involved, the fourth and final section of the paper will explore the potential roles which these institutions might play as their interrelationships change over the period of transition to modernization.

I. The Technical Requisites of
Agricultural Modernization

Certain basic public services are as crucial to the growth of agriculture as they are to progress within other economic sectors or to the development of the society as a whole. Among these services are the maintenance of peace and order, the guarantee of accepted justice, and investment in the overhead capital of the society including facilities for major social services in the areas of health and education. In addition to these, however, the agriculture of emerging nations has certain specific technical needs.

The performance of agriculture in low-income countries is generally characterized by low productivity of the resources committed to farming.

It is well recognized that under specific circumstances, inputs to any production process must be combined in certain proportions in order to maximize the efficiency of output. We need only be reminded that if the amount of one input is increased while others are held constant, added output attributable to each successive unit of the variable eventually declines and may reach zero or negative values. Thus, land, labor and capital, the familiar categories of physical inputs are complementary to each other and must not only be combined but must be combined in appropriate proportions. However, in many low-income countries certain agricultural resources are available in considerably more abundant supply than are others. Since relatively few alternative opportunities exist, in these situations, for the resources committed to agriculture they tend to be utilized according to their physical availability. Consequently, the productivity of the more abundant resources may, in fact, be quite low.

The marked imbalance between "abundant resources" and "scarce resources" and the limited range of substitution between them under the conditions of agricultural technology in traditional and transitional societies, is the core of the problem of low productivity. These resources cover a broad range of physical and intangible factors which are subject to human control and which have a material bearing on the level of agricultural output.

Primary among the abundant resources, and the one most frequently cited, is labor whose total supply is determined by what appears to be the inexorable growth of population, and whose opportunities in non-farm employment seem to be distinctly limited in the early stages of development. Thus the bulk of net additions to the labor force stays on the farms, frequently contributing less to output than it consumes for subsistence (6). This abundance of labor is the basis for substantial increases in production should complementary scarce resources become available to combine with it.

What are the scarce resources? Capital is generally regarded as a scarce resource within the context of low-income countries. For most forms of capital this is true and the availability of improved simple tools, storage facilities, power sources and other equipment tailored to the relatively simple, general-purpose needs of a developing agriculture could, in combination with other complementary scarce resources, lead to marked increases in output.

In view of the high man/land ratios common in populous low-income countries, land is usually regarded as a scarce resource. The pressure of population has forced labor productivity down on available land. However, land also may have characteristics of abundance. Indeed, all "scarce"

physical resources committed to agriculture may have characteristics of abundance if their current productivity is low due to the lack of other, complementary, "scarce" resources. There is no reason to assume that technology need remain static. Opportunities to improve knowledge, technique and organization should be weighed against opportunities to obtain additional capital and land which to employ at or near existing levels of technology.

Recent writing has drawn increased attention to a variety of inputs to which economists have not traditionally given much notice.^{1/} These "neglected" or "unconventional" inputs, as some have chosen to call them, are largely of a technical, educational and institutional nature. Their absence is what largely distinguishes a traditional agriculture from a progressive one.

As agriculture is dislodged from the determinants of tradition and moves through various transitions toward a greater market orientation of production, there is a diversity of requirements that have to be met in order that the appropriate proportions of physical, technical and institutional inputs, may be committed to the process.

At the farm level, which is the point of implementation, certain choices and decisions have to be made. In order to make these choices appropriate to the development of agriculture, farmers, whether they are owners, tenants or hired managers, need the following:

1. An awareness of the full range of production alternatives open to them.

^{1/} This section relies heavily on three papers (1, 2, 5) cited in the bibliography, for its discussion of the concept of complementarity involving "neglected" or "unconventional" inputs.

2. Information on the workings of these alternatives under local conditions and of the crucial factors or conditions which determine their successful implementation.
3. The ability, or the means of acquiring the ability, to control these factors or to master the necessary skills.
4. Technical assistance in dealing with baffling or unforeseen circumstances.
5. Ready access to production resources which they cannot create themselves from materials under their control.
6. Sufficient incentive to attempt innovations rather than to continue in previous practice.

There appear to be at least three, and probably four, major kinds of activities which will determine whether these needs will be met. These are education, adaptive research, the logistics of input supply, and the generation of incentives among farmers.

Education in this context refers to two major forms. First, there is that kind of education which develops the intrinsic capacities of each cultivator. Programs of general elementary education are aimed at providing facility with reading, writing and elementary calculation. Such competencies tend to widen the horizons of an individual and to increase his confidence in his personal capacities to make choices. These competencies may also enhance his perspective on the complexities of the social, political, economic and physical world. A cultivator so equipped with elementary general knowledge is likely to be more responsive to the stimuli which will guide his adoption of agricultural innovations than one receiving less or no education.

The second kind of education specifically relevant to this context is that which transmits to the farmer particular skills of agricultural improvements and innovations. Since this kind of education is tied to the process of adaptive research, being the bridge between the needs of the cultivator and the available research results, its characteristics are closely allied to the objectives and processes of this kind of research. This kind of education requires a high degree of flexibility in its methods and substantive contents since it must be geared to the organizational patterns of government agencies, the particular characteristics of local farmers, the availability of personnel trained to form the communications bridge, and the nature of the research results themselves.

Adaptive research is also of primary importance. It is largely because it has frequently been overlooked that the technical content of rural development programs has commonly proved so inappropriate in particular areas. The biological nature of crop and livestock production, the almost infinite variety of environmental characteristics, and the interrelationships and complementarity of new inputs require careful adaptation of promising innovations before they can be successfully implemented.

A common temptation for harried policy-makers who may not be technically prepared for the decisions forced upon them, is to order importation of particular production inputs such as fertilizers and insecticides and to direct them for local use by farmers as per accompanying specifications. To yield to this temptation is to risk wastage of scarce foreign exchange and to build a reputation for ineptitude that is sometimes hard to overcome.

Appropriate kinds of research do not require a great elaboration of facilities and specialized staff. In addition, an immense body of basic

research results has been accumulated elsewhere in the world and is at the disposal of local technicians. The principles and techniques of plant and animal breeding, machinery design, soil conditioning, and pest control are known. The need is to adapt these techniques to the limitations presented by the local environment. To do this, particular innovations have to be combined and tested with complementary inputs. For example, hybrid corn is grown under fairly specific conditions of temperature, pest control, soil moisture and nutrient content, and timing of farming operations. To use corn seed which commonly produces 80 bushels to the acre in Iowa under average conditions of management, by itself, alongside native corn varieties in Mexico, might give it a poor showing. Indigenous varieties, by natural selection, have at least become resistant to the vicissitudes of the local environment that might alternatively starve, wither, or consume a more demanding imported variety. As an innovation, hybrid corn is not only seed but a bundle of complementary inputs including seed, water control, fertilizer, soil conditioning, pesticides, and management.

In order to approach the spectrum of local conditions it is likely that the more dispersed or decentralized research organization will be more able to come up with the appropriate combinations of inputs.

Input supply may require considerable organizational and political talent in order to establish priorities and to make the availability of production resources appropriate and timely at the places needed. Some inputs may be produced domestically while others may have to be imported. Improved plant and animal strains, fertilizers and feeds, pesticides and vaccines, and tools and facilities for modernizing husbandry are the major categories into which these production requisites fall.

A major series of decisions involves the provision for local manufacture or the arrangements for importation.

Seeds and sires are amenable to local production although they have rigorous demands for quality control. Fertilizer production, in order to be efficient, usually requires a large centralized plant but nonetheless may be produced domestically. Animal feeds may be produced on a moderate scale, especially for intensive livestock operations (such as commercial poultry and egg production). Some kinds of pesticides and a variety of tools may be manufactured in modern small-scale plants. Local blacksmiths and other craftsmen may be able to participate in supplying simple tools of improved design. Vaccines require rigid laboratory standards and may be more economical to import than to produce locally. Some fertilizers and pesticides as well as animal feed supplements may have to be imported and are sufficiently important to agricultural development as to deserve priorities in the commitment of foreign exchange.

The logistical problem of providing production inputs includes making them attractive to farmers. They have to be priced within the grasp of the cultivator. More important, however, these inputs have to be effective and dependable in their performance and quality if the innovators are to sustain an interest in them. In addition they have to be available at the time they are needed, for the moments of effective utilization in agriculture occur over a fairly narrow time range. The means of distribution (whether government or private, whether through marketing channels or outside the market) are a question of local feasibility. Similarly, the particular form of production credit may be a question of local feasibility.

A fourth activity, associated with the technical requirements of agricultural production, which ought to be added to education, adaptive research and logistics, is provision of incentives of kinds that will attract or otherwise pressure the farmer to depart from traditional practice and attempt innovation. Incentives are the product of the spectrum of basic cultural values, habit, psychological inducements, economic institutions, considerations of risk and security, and revisions in the scope of opportunity. The system of land tenure, for instance, frequently carrying the inhibitory effects of hierarchical social relationships, and economic vulnerability with it, is of crucial importance in determining the outlook of the cultivators of many developing countries. Effective reforms in this area often have marked effects on increases in output through widespread acceptance of technical innovation by those cultivators who feel the potential for personal betterment through their enhanced claims on agricultural output.

Marketing arrangements also play an important part in shaping the incentives farmers feel in regard to increasing their output. Under prevailing marketing systems individual farmers may not be able to obtain prices for their greater output sufficient to meet their added costs. This may be because of the disadvantageous bargaining positions of individual farmers facing an organized marketing structure frequently under the control of minority ethnic groups. It may also be because of sharp price declines in the face of production increases. Market reorganization, including the provision of information services, or the formation of marketing cooperatives, and even minimum price guarantees may have a strongly favorable influence on farmers' acceptance of innovations.

The needs of education, research, the supply of production inputs and incentives will in most instances have to be provided to farmers through government initiative and with the sustaining drive of public involvement. In the following section the various institutions of rural government will be discussed with particular reference to the parts they can play in meeting the needs of a modernizing agriculture.

II. The Meaning of "Rural Government"

Government is the process by which the public affairs of any definable group are directed and managed.^{2/} The particular affairs are "public" insofar as their concern is not wholly internal to the basic social unit (such as the nuclear family) or to a specific group (such as a trade guild). "Government" is reflected both in the processes of public management and in the structures through which this management is performed. It combines two concepts, "politics" and "administration." Politics is the process of competition among individuals and groups seeking power to determine courses of action. The organization for, and the implementation of, these courses of action involves the concept of administration. Administration is expressed in the exercise of authority according to the conventions accepted by the group.

Rural government is distinct from urban government and from national government insofar as the "public" in each case has distinguishing traits and is concerned with different political issues. The individuals and groups within rural areas in most low-income countries tend to be less mobile, and largely neutral (if not inert) on issues of urban, national and international policy. Being relatively more integrated, they place a high value on stability and the security of group welfare. Yet profound changes will occur as the society and technology of farming communities join in the evolution toward modernization. It is within rural areas that agricultural development programs are implemented. And it is through rural governing institutions that this implementation takes place.

^{2/} The concept of "government" as applied in this discussion is equivalent to that used by M. G. Smith (7, pp. 47-51). Although the formulation used here is based on Smith's succinct presentation, certain modifications have been made in adapting it to the present context.

An important aspect of purposeful programs of agricultural development is the physical (or spatial) location of the impact of the programs on those who will actually be asked to implement particular changes, namely, the cultivators. A myriad phenomena may be set in motion in various parts of the nation, if not the world, that relate to changes in the agricultural process in a particular situation. But the point or points of impact are circumscribed by the horizon of the farmer himself. If, as in most areas, the farmer moves only within the narrow regions surrounding his village and reaching perhaps as far as the market town (and sometimes beyond to the provincial capital), the programs which will transmit or influence agricultural change will have to meet the farmer on his home ground -- his own locality.

In transitional economies the process of agricultural production is an integral part of the way of life of the farmer, his family and his village. Although it is frequently possible to make an analytical distinction between agricultural production and other aspects of family life, it is not possible to separate them in practice for they are closely bound together and interrelated. Therefore the institutions which provide direction to the management of public and private affairs in rural localities are likely to have a number of general traits in common. Some of these traits, relevant to our discussion, will be briefly discussed below.

In regard to the functional scope of particular institutions, they may be "diffuse" or "specific" (3, pp. 255-262). If they are diffuse they have broad authority to act in a relatively wide range of functions. A hypothetical illustration would be that of a family patriarch who, among other things, may arbitrate disputes, make major economic decisions, instruct in moral principles, plan local construction projects, and

organize the celebration of festivals involving the constituent members of his family. If an institution is specific it has authoritative qualifications only in a narrowly limited range of activity. For instance, a local rice miller has relevance to the community only as a miller of rice. As such he has no particular qualifications that would permit him to perform other functions and no one would approach him to do so unless he, in fact, were more than merely a miller of rice. If the family patriarch were the owner and operator of the local rice mill, the people approaching him to settle a dispute or to advise on a decision would be doing so in his diffuse role as patriarch rather than in his specific role as rice miller.

Some of these institutions are explicitly differentiated and recognizable governing "structures" or "offices" with their associated "processes," while others may be processes that ramify throughout a number of institutions and which implicitly impart to these the status of governing institutions. It is among these latter, implicit, governing institutions that the greatest overlap occurs between the management of private and public affairs. It is also among these implicit governing institutions that the greatest duplication of effort occurs since a number of them may perform the same function independently of each other. In addition the performance of the function by each of these may be according to different standards of equity, efficiency and quality.

Certain clearly differentiated governing institutions with specific roles may acquire additional characteristics of implicit governing institutions with either specific or diffuse roles without giving rise to debilitating conflicts among these roles. For instance, a hypothetical national government may view the post of District Officer as one that is explicitly differentiated with specifically assigned functions, say, of

revenue collection, maintenance of peace and order, adjudication of minor civil and criminal disputes and the coordination of administrative activities in the district. However, to the people within his district the District Officer may have a quite diffuse role, that of a virtual factotum, since he is the living representation of the broad authority of the national government and, let us say, has control over other functionaries in the district. Further, he may eventually be approached by residents in the district for such things as advice on the design of local public works (such as roads, canals, bridges and ditches) or requests for aid in financing such activities. He may be asked to participate in local ceremonies or to transmit or endorse personal requests and claims to higher echelons in the national government. These latter functions may also be performed by other local notables but since the functions are not specifically allocated to particular structures the District Officer is also qualified and shares these implicit roles as well.

✓ In practice, rural governing institutions combine in a totality of public action and only few of the participants have clearly allocated functional jurisdictions. Because of the indistinction between the various forms of public action, rural government becomes a procedural complex affecting all forms of activity. But for the purposes of this analysis certain distinctions need to be made in order to see the salient features of the differing structures and processes included within the concept of "rural government."

This concept includes the smallest administrative authority recognized or established by the national government, the representatives of the next administrative echelon higher than the village council or headman (if not an agency of the national government), the representatives of

central government agencies operating within rural localities, local organizations or activities promoted by the national government on an "unofficial" or "informal" basis, organizations and activities promoted by the natural power structure (if different from formally recognized authorities), and customary and traditional forms of public action among rural people. These will each be discussed in turn.

1. The smallest administrative authority recognized or established by the national government. Usually, its explicit administrative jurisdiction is approximately limited to the smallest integrated area of geographic, social or economic community. This is what is usually meant by the term "local government" -- the formal officials or bodies which include village headmen and village councils.

In the view of the national government these authorities are explicit and functionally specific although villagers may see them as functionally diffuse, sharing functions with other, implicit, rural governing institutions.

2. The representative of the next administrative echelon higher than the village council or headman (if not an agency of the national government). The jurisdictions of these representatives are usually limited to a finite group of villages and they are not mobile as between jurisdictions.

In the view of the national government, the authorities at this echelon are explicitly established and functionally specific. As in the case of village-level authorities, village people may see these as functionally diffuse although, since they are slightly more remote, they may have fewer traits of implicit governing institutions.

3. The representatives of central government agencies operating within rural localities either directly or indirectly, regularly or sporadically. These representatives include such individuals as district officers, province chiefs, school teachers, police patrolmen, public health workers, and agricultural extension agents.

In the eyes of the national government these representatives are explicit and their roles are specific. In the eyes of villagers the diffuseness of the roles of these agents varies directly with the breadth of their authority and power. Thus, a district officer's role would be more diffuse than that of a police patrolman. However, the members of a police patrol are likely to be looked upon as having a more diffuse role than that of a veterinary worker. Similarly, a public health worker would have a more diffuse role in the eyes of villagers than would an operative in a malaria control spray team.

Depending on the frequency of contact these agents have with rural people, and on the quality of the rapport established, these representatives of the national government may come to share in the functions of implicit rural governing institutions.

4. Special-purpose local organizations or activities promoted by or linked with the national government on an "unofficial" or "informal" basis. These include patriotic political activity; "voluntary" parent-teacher, farmer or other interest associations; cooperatives; community development projects; and village volunteer guards.

Although the national government may have explicitly authorized the establishment of these institutions, they are cast in diffuse roles. These are presented to rural people as but an addition to their traditional organizations and activities and are viewed by them as

having either diffuse or specific roles, depending on whether or not these new institutions are actually assimilated by rural people into their range of traditional institutions (in which latter case they might be diffuse and eventually share implicit functions). If, however, they are accepted on the strength of national government pressure alone they would be more likely to be viewed by villagers as having roles as specific as the nature of the required formal compliance; and to be the explicit creatures of the national government.

5. Organizations or activities promoted, sponsored or regulated by the natural power structure (if different from formally recognized authorities). These include religious organizations and their ceremonies and festivals, village-wide convocations, autonomous local public works projects, patterns of commercial activity, partisan political activity and institutionalized economic and social relationships involved in land tenure and agricultural credit systems.

These institutions are distinguished from those under item four, above, in that they are not specifically established by the national government but instead flow from the effective rural power structure.^{3/} In the case of religious institutions they may be explicit while institutions providing rural credit may be less easy to recognize and may be implicit.

^{3/} In countries where the national government has mobilized the countryside and pre-empted very nearly all forms of public activity, this category of institutions may not exist. Instead, the kinds of institutions given as illustrations here would be included in the previous category, under item 4, above.

6. Customary or traditional forms of public action which tend to determine the procedures which rural people will follow in their public activities. To the extent that procedures such as the holding of village-wide meetings to discuss specific questions, resource mobilization through the assessment of ad hoc contributions, and execution or implementation of projects using forms of cooperative public labor are institutionalized they are implicit in the variety of other institutions which may utilize them, and they are functionally specific.

Such a broad definition of "rural government" paints a useful picture of diverse local interaction. It lays out one terminal of an administrative continuum that reaches to the national capital. ✓ It shows rural government partly as an arm of the national government; and the national government partly as an upward reach of rural government. This interpretation is an intentional contrast to a variety of currently-held views which see these two levels of government, at the national level and within the rural locality, as impediments to each other's activities and operations. It is likely that such views are in many instances drawn from correct observations of the contemporary scene and of past history, but it is also likely that these views do not visualize the potential for working together in future plans and relationships.

From the point of view of an individual farmer the interacting traditional institutions (both in their structures and in their powers) are part of his upbringing and their norms are second nature to him. ✓ On the other hand the multiple facets of the central government are remote and, although massive, are interpreted to him either by the village headman or by the handful of government technicians with whom he has contact. To the farmer the national government is similar to an inverted pyramid whose

broad authority gains access to him via echelons diminishing in authority until the ultimate contact in his own locality.

The nature and form of these contacts are the substance of "rural government" and it is through rural government that agricultural and rural development programs will be implemented if they are to be implemented at all.

III. Field Administration of Agricultural Development Programs

As noted earlier in this paper, farmers have to make certain choices and decisions if they and their operations are to participate in the modernization of agriculture. However, as was pointed out, they can't make appropriate decisions without certain publicly provided services, particularly those in the areas of education, adaptive research, the supply of production inputs and the provision of incentives.

Are these services being provided now? by which institutions? If these services are not being provided, how can this failure be explained? and, then, what can be done about it?

In order to deal with these questions we must ask others such as: How do farmers learn about farming methods? In what form is information on new techniques made available to them? Is this information adapted to their specific situations? What incentives are there that encourage farmers to change their practices? What control do farmers have over needed resources?

In this section we will approach answers to these questions by referring to observations on the field administration and implementation of public programs emphasizing agricultural improvement.^{4/} The setting is the rural area of a single province in Northeast Thailand in the late 1950's. Our considerations will include the programs implemented by personnel staffing the field agencies subordinate to the technical branches of the national government (particularly those under the Ministry

^{4/} These observations are drawn from the author's dissertation research (4). Although expressed in the present tense, the period of reference is the late 1950's.

of Agriculture and Ministry of Cooperatives), the rural development program supervised by the provincial governor and district chiefs (who are field agents within the hierarchy of the Ministry of Interior), and other relevant activities involving the initiative or close cooperation of rural people themselves.

The cases cited here are illustrative only and are not necessarily "typical" of public activities in this particular area. Although other examples could be cited to give a more valid impression of the specific institutions involved these observations offer a fair representation of their normal activities. Parallels could be cited for similar areas within other low-income countries.

Before proceeding further it will be necessary to outline the institutions of government at all levels within the province. Following this will be an examination of the major programs undertaken by agents of the national government. Finally, the impact of these programs will be appraised in terms of their effects on rural people and the approach commonly taken by farmers in meeting such needs as they feel exist in their agricultural activities. After this sequence we will be in a better position to deal with the questions posed above.

The chart shown in Figure 1 on the following page is a schematic indication of the levels of government within a Thai province. Essentially, there are four echelons of administration, the province (changwad), the district (amphur), the commune (tambol), and the administrative village (muban).

At the provincial level, the governor, an appointed career official in the regular civil service, is the chief administrator and reports directly to his superiors within the Ministry of Interior. There are

Figure 1. ILLUSTRATION OF RURAL PUBLIC INSTITUTIONS
WITHIN A SINGLE PROVINCE
UDORN, THAILAND, 1959

Level	Chief administrator	Field offices	Consultative or legislative bodies	Informal groups
Province	Governor	<u>Under gov.</u> Pub. Health Agriculture Education Taxation Police etc. <u>Independent</u> PTT Court Audit Team Highways etc.	Provincial Committee Provincial Council	
District	District Chief	Pub. Health Agriculture Taxation Police Education etc.		
Commune	Commune Chief Headman Assistant Medical Worker	Health or midwifery center	Commune Council	
Administrative Village	Headman	Preliminary school		Buddhist temple "Respected persons" "Village Assembly"

upwards of 30 field offices of the various technical and administrative services of the national government represented at the provincial level. Each of these offices is under the supervision of a chief officer. A feature of Thai field administration is that some of these agencies are under the supervision of the provincial governor while others report directly to regional or central office superiors within the hierarchy of their particular branch of service.

The general criterion explaining this separation of field offices is that some agencies have activities that are congruent with the general responsibilities of the governor to maintain order and to provide for the general welfare and administration of the particular province. This includes Police, Public Health, Education, Agriculture, Taxation and a range of similarly oriented agencies. Other offices either are of such a nature that they should be independent of the influence of local administrators, such as the Court and Auditing Team; or are part of a national communications network, such as the Post Office and the Office of Radio Communication; or are part of activities best coordinated at the regional level, such as Malaria Control, Highways and Irrigation. The governor has no direct means of influencing or coordinating these "independent" agencies although he generally has good success in gaining informal cooperation. At the provincial level there are two principle legislative or consultative bodies. One of these, the Provincial Committee is composed of the chief officers of each national government field office under the governor's direct supervision plus the district chiefs who are the administrators of the several districts that make up the province. The Provincial

Committee holds regular and special sessions at the call of the governor and at least once a month. At these times the governor transmits relevant orders, policy statements, and information received from the Ministry of Interior as well as from other sources. He also sounds out these high-level subordinates on their particular problems, on the conditions within their functional and geographic jurisdictions, and occasionally seeks their reactions to tentative policies of his own or of higher echelons.

The other province-level body is the Provincial Council which, though formerly organized as a legislature, is utilized primarily as a consultative council by the governor who in practice takes the initiative in guiding its activities. Half the members of the Council are elected from within the districts of the province on the basis of population. An equal number of members are appointed by the governor. The Provincial Council meets annually for a period of two or three weeks and its main order of business is the allocation of "rural development funds" to small-scale development projects within each of the communes of the several districts of the province, and to other needs within the province. These "rural development funds" are comprised of the sum total of land taxes paid by farmers and other land owners within the province plus some minor surcharges on excises levied by the national government.

At the district level, the district chief is the over-all administrator. Apart from his own administrative staff, he supervises the activities of the dozen or so branch offices working at the district level as subordinate units of parent technical or administrative service agencies represented at the provincial level. He also has direct responsibility

for the state of public affairs in the district as a whole, including those at the level of the villages and communes, and in the commercial centers. He discharges these responsibilities through personal tours of inspection and through monthly meetings attended by the village headmen and teachers at the district headquarters. The district chief calls these meetings following his return from the monthly meetings of the Provincial Committee. Village headmen in turn, hold convocations of village residents after returning to their particular jurisdictions. It is at these meetings that the village headmen transmit to the villagers information on new policies and regulations. Other information of a more general nature is also transmitted at this time and general consultative discussions are sometimes held as well.

To skip over the commune level for a moment, the administrative villages are each under the formal charge of a locally selected headman who has been confirmed in his office by the provincial governor. The only other government representative at the village level is the teacher (or teachers) at the local preliminary school. Other government representatives from Police patrols and Excise Tax inspectors to Agriculture, Livestock and Public Health workers are also encountered in the villages but only at intervals.

At the village level the major informal institutions are the Buddhist temple with its complex of religious and lay personnel and the pool of "respected persons" who through age, morality, learning or other traits have won the esteem and trust of villagers. These respected persons serve as a reservoir of leadership to lead ad hoc groups or committees in certain kinds of local projects and other local activities. In addition, the adults of the village, who attend the monthly convocations called by the

village headman, and who are the electors of the headman may be looked upon as the "village assembly."

The village headmen within each of the communes in the district select one from among their own number to serve concurrently as commune chief headman. He selects an assistant for himself and selects a commune medical or health worker. Their functions are largely supervisory and implicit in their titles. At the commune level there is occasionally a health or midwifery center staffed by personnel of the Ministry of Health operating under the supervision of the Public Health Offices at the district and provincial level.

Also at the commune level is the Commune Council made up of local representatives, some of whom are villagers selected by the village headman and appointed by the district chief and the remainder of whom are selected from among the head teachers of the rural preliminary schools located in the commune.^{5/}

The commune chief headman is chairman of the Council although in practice it is the district chief or his representative in attendance at the meetings who acts as chairman. As originally conceived, the Councils were to hold monthly meetings to discuss local problems and their solution. However, the Councils meet only two or three times a year and their main order of business is to decide on the utilization of the rural development funds to be allocated to the commune by the Provincial Council.

^{5/} This method of selection observed in the course of the field study was at variance with the original intention that the village representatives be locally elected. However, because of time pressures at the inception of the Commune Councils these representatives were, as indicated, appointed by the district chiefs on the recommendation of the village headmen.

In theory this allocation equals all or, as in more recent years, a fixed major proportion of the land taxes paid by people within the commune.

Within this range of public institutions the field agencies of the national government loom large. Several of these agencies work either partly or entirely in the general area of agriculture and the improvement of rural productivity. These are listed below:

Interior	Agricultural Extension
Fisheries	Cooperative Land Development
Forestry	Irrigation
Livestock	Land
Rice	Land Settlement
Agriculture	Re-education
Cooperatives	

For some of these agencies at the time of the field study agricultural work comprised only a fraction of their activities. For instance, the major responsibility of the Interior Office was to oversee administration and welfare in the province, only part of which pertains to agricultural affairs. The Office of Re-education, which managed a prison, included agricultural training in its vocational rehabilitation programs for the relatively small number of individuals under its control.

On the other hand, the work of some of these agencies was not intended at the time to involve all, or even a significant portion of the people of the province. Only the central district of the province, that surrounding the provincial capital, had been opened to detailed cadastral surveys by the Land Office which then issued deeds for land holdings. There was only one Land Settlement area in the province. The "community development program" of the Ministry of Interior involved only one village in the province at the time the field data were collected. The Irrigation Office concentrated its work on large-scale water control facilities. There were only three Land Development Cooperative Societies working to develop land

resources in areas surrounding irrigation tanks. The Office of Agricultural Extension was operative only on a pilot basis involving a handful of locations. These several agencies had set out to accomplish limited goals and thus their work was not of the kind to be generally encountered within the villages of the province.

Consequently, the presentation that follows examines only some of the work of particular government agencies. It will focus on that work which was designed to affect the majority of the people of the province. Some work of narrower scope may be discussed as well. The governing criterion will be that the work examined was planned to involve the people of the province in programs within the scope of agricultural modernization. The specific programs that will be covered are as follows:

1. The rural development program of the provincial governor.
2. The promotion of fish culture in home ponds by the Fisheries Office.
3. The forestry promotion programs of the Forestry Office.
4. The promotion of improved livestock breeds by the Livestock Office.
5. The promotion of rice production by the Rice Office.
6. The promotion of upland crops by the Agriculture Office.
7. The organization, control and counseling of cooperative credit societies by the Cooperatives Office.

What resources did the Interior, Forestry, Livestock, Agriculture, Cooperatives, Rice, and Fisheries agencies have at their disposal? In 1958 the provincial governor estimated the population of the province to be around 600,000. There were slightly over 5,000 persons on

government payrolls in the province and all were paid out of national funds. Half of these were school teachers and another fifth were local village officials (who received only token honoraria for their services).

The six technical agricultural agencies listed in the preceding paragraph had 73 employees. The other agricultural agencies pursuing limited programs had 142 workers. The Interior Office had a personnel strength of 98 to cover all its programs. This total strength of 313 included all the personnel who had any direct connection with agricultural improvement work. Table 1 outlines the distribution of these personnel by rank within each agency. Table 2 gives an indication of their educational qualifications.

Not only are agricultural officials few in number but they are generally poorly trained in the technical or managerial skills a field agent would need to do meaningful work. Most officials had progressed only as far as secondary school and only a portion of these had completed the standard six years. Within the Rice and Agriculture Offices, workers had taken part in teacher training courses in agricultural education. Few technicians (one each in Forestry, Cooperatives, and Fisheries) had any college-level training. Those college-trained personnel serving with the Interior Office were schooled in law. The workers under all these agencies varied widely in their length of employment experience. Such experience might provide additional apprenticeship, or in-service training, but this is under the guidance of superiors with no better qualifications than those indicated in Table 2.

As we shall see in what follows, the various agricultural programs designed to transmit certain practical skills failed to do so. Although chronic shortages of manpower, materiel and finances posed serious

Table 1.

Personnel Strength of National Government Field Agencies
Pursuing Agricultural and Non-agricultural Programs
Udon Province, Thailand, 1958-1959

Agencies	Personnel							Total	
	Personnel with permanent tenure				Personnel without permanent tenure	Military and police personnel	Local village officials		
	Special grade	First grade	Second grade	Third grade					Fourth grade
With broad agricultural programs									
Interior	-	3	9	9	67	10	-	1,087	1,185
Forestry	-	-	-	3	19	5	-	-	27
Livestock	-	-	1	4	3	-	-	-	8
Agriculture	-	-	-	1	4	-	-	-	5
Cooperatives	-	-	1	5	11	5	-	-	22
Rice	-	-	-	1	1	-	-	-	2
Fisheries	-	-	1	-	2	6	-	-	9
Sub-total	-	3	12	23	107	26	-	1,087	1,258
With limited agricultural programs	-	1	4	5	57	75	-	-	142
All other agencies	1	11	42	152	2,550	376	484	-	3,616
Grand total	1	15	58	180	2,714	477	484	1,087	5,016

Table 2.

Educational Qualifications of Personnel of
National Government Field Agencies
Implementing Agricultural Programs of Broad Scope
Udorn Province, Thailand, 1958-59

Agency	Employ- ment tenure status	Number of personnel	Highest level of basic educational attainment				Additional educational qualifications			
			Prelimi- nary school	or less of secon- dary school	Advanced secon- dary school	Six years	Teacher training	Govern- ment in- service training	Univers- ity degree or diploma	Law degree or diploma
Interior a/	Permanent Non- permanent	88 10	2 10	80 --	6 --	3 --	1 --	1 --	1 --	14 --
Forestry	Permanent Non- permanent	22 5	-- 1	(22 b/) 4	-- --	-- --	-- --	-- --	1 --	-- --
Livestock	Permanent	8	1	6	1	--	7	--	--	--
Agriculture	Permanent	5	--	5	--	4	1	--	--	--
Cooperatives	Permanent Non- permanent	17 5	-- 4	15 1	2 --	-- --	-- --	-- 1	-- --	-- --
Rice	Permanent	2	--	2	--	2	--	--	--	--
Fisheries	Permanent Non- permanent	3 6	-- 6	1 --	2 --	-- --	1 --	1 --	1 --	-- --

a/ Local village officials, supervised by the Interior Office, were only required to be literate. Information on these personnel is not included in this table.

b/ Information on permanent Forestry personnel indicates that seven had no more than six years of secondary education, 14 others had either six or eight years, and one definitely had eight years.

problems, the major stumbling block was in the process of communication. The weaknesses in the qualifications of the government officials in both agricultural technique and the ability to appreciate and adapt to specific situations prompted them to make frequent use of their status and authority in inducing villagers to at least give formal attention and compliance to the programs presented to them.

The motivation for participation by villagers will be generally seen as deference to authority. In a sense this kind of participation is ritualistic.

Rural Development Program Sponsored by the Provincial Governor

In recent years the governor had initiated a three-phase Rural Development Program. With the approval of his superiors in the Ministry of Interior one village in each district was to participate in "community development." At the time of the field observations one district in the province was participating in "rural economic development." The third phase of "general economic promotion" was aimed at elevation of the general economy. Since only this third phase was of general scope, the discussion which follows will examine the initial phases of getting the general economic promotion program under way in the rural areas of the province.

Meetings of the village headmen, commune chief headman and teachers were called by the district chiefs to select three farmers and two teachers from each commune in the province. These persons received one day of training in their respective districts. This training involved lectures on agricultural techniques such as tree-grafting, animal castration, feeding and vaccination, land preparation, composting and so forth. This

training was held at the district headquarters and was conducted by personnel from the province-level offices of Agriculture, Livestock, Forestry, Fisheries, and related services.

At about the same time the district chiefs and other district officials (such as the heads of Education, Agriculture, and Livestock), together with a preliminary school teacher from each commune participated in a week-long training session given at the provincial capital. Three officials from the United States Operations Mission (USOM) to Thailand and 14 from the Ministry of Agriculture acted as instructors in the training program. Some 27 province-level and district-level officials acted as resource persons as well as trainees. The major focus of the training, however, was on 60 "field workers" who were preliminary school teachers drawn from each commune. They had been relieved of their teaching responsibilities. The content of the program emphasized upland crops and agricultural enterprises other than rice. The USOM provided seeds and fertilizers, the Provincial Council provided funds for transporting the seed, and provided a motion picture camera, film, and travel and per diem funds for the officials engaged in the program.

The on-the-ground aspects of the program were initiated during the monthly meetings of village headmen and school teachers held with the district chief at his headquarters. In the district involved in the field study, the district chief spoke at length concerning the development program. He had five technical officials associated with the development program speak for about half an hour each on the phases appropriate to their particular specializations. At this same meeting the district chief indicated the teacher from each commune who was to manage the development work. Each was supposed to supervise five plots of land devoted to rice,

peanuts, sugar cane and a legume. The district chief was said to have selected these seeds from a list of seeds available for distribution by the Ministry of Agriculture. In making this selection, the district chief consulted with the district agriculture officer and with the village headmen at the time of their monthly meetings. His purpose in this consultation was to select crops which appeared suitable to the particular area.

At the time of the field study, the program of intensive development of upland crops was less than a month old. However, it was apparent that those who attended the initial meeting came away with slightly different understandings of what transpired, especially as to who was responsible for supervising the program at the commune level. In two of three villages visited, the teacher-field worker was looked upon as being responsible; in another, the headman was. None of the informants recalled the same meeting in the same way. They were all aware, however, that the district chief and some district officials connected with development had spoken. They could not recall who the particular officials were. They were aware that particular crops had been assigned to each commune by the district chief. They were also aware that the village headman had to submit the names of people who would devote land to the different crops. In one village the names of the headman, his assistant and the head teacher were submitted; in another, the headman selected two people and assigned the leguminous crop to the local school.

Two things of importance stood out. First, the villagers were instructed that they should participate; and, second, they were only lectured in the technique. Authoritarian directive promotes compliance but, of itself, does little to promote understanding. In one village, the informants facetiously suggested that the villagers would, in all probability, raise corn and sugar cane by the seed-bed and transplantation

districts in each of two other provinces. There were only three staff members of the station that engaged in active promotion of home fish culture in addition to their other duties.

The talks given to the various groups had virtually no influence on the promotion of fish culture. Informants within the villages studied made no mention of work directed toward the cultivation of fish in home ponds.

Forestry Program

The ultimate objective of the Forestry Office was the promotion and control of forest resources.

The promotion of tree-growing was only a minor function of the forestry officials in the province. This was restricted to the distribution of some 2,000 seedlings, 200-800 pamphlets, and about 50 posters for the Thai equivalent of "Arbor Day" which fell once a year. The provincial forestry officer spoke occasionally at meetings of district and local officials.

Among the villagers there was no concept that the forest was a limited resource, and despite standing regulations and occasional penalties, they exploited it for domestic construction needs.

In former years the foresters used to visit the villages to discuss the forestry code and the methods of compliance. However, this information and any changes in the regulations were currently passed on to village headmen at the time of their meetings at the district headquarters. The forestry officials felt that their most important work was the supervision of commercial lumbering, which involved the collection of significant revenues from concessionaires. Patrols of the forests were worked in by forestry officials as time allowed.

Livestock Program

One of the three aspects of the work of the Livestock Office was the promotion of livestock raising. At the time of the field study this also was considered to be a minor phase of the work of the office and secondary to the control of livestock diseases and the control of livestock marketing (as a form of disease control).

The promotion work was done by the district livestock officer at the time of visits to the rural area for disease control purposes. Meetings were called in the evening at which time the officer would talk on livestock raising. At these times he emphasized livestock housing, preventive sanitation and preventive inoculations. Occasionally he held meetings at other villages on his way to or from areas hit by disease outbreaks. In the course of a year a district livestock officer (where such existed) might cover on the order of 60-70 villages in this way. The livestock officer's assessment of the breed improvement program, involving the local letting of one or two improved sires, was that it had little if any success because of its limited scope. The officer ascribed the problems of introducing improved practices to a general lack of knowledge among the villagers which he felt prevented an appreciation of general animal care. The livestock promotion program was only a minor aspect of the total activities of the Livestock Office and no special effort was being made to put greater emphasis on it.

Rice Programs

The province-level Rice Office had as one of its functions the promotion of improved breeds of rice. It may be recalled that the staff of this Office was composed of only two officials.

The procedure used by the rice officer was to attempt to establish "rice promotion committees" in the villages with the headmen as the local chairmen or sponsors. The rice officer attended one of the monthly meetings of local officials in each of the districts and attempted to ascertain the growing conditions in each area which would determine the appropriateness of the particular breeds available from the Rice Department in Bangkok. At a subsequent time the rice officer distributed seed to the district headquarters of each district. The seed was, in turn, distributed to the village headmen in five kilogram lots (about 11 pounds) at a charge of about the equivalent of \$.30 per five kilogram unit. The village headmen paid for the seed out of their own pockets and re-sold them to selected farmers within each of their villages. Seed from that harvest was to be sold to other farmers in the area. The rice officer was able to follow-up on only 50 of the recipients.

In the one village studied, into which these seeds had been introduced, plantings were conducted by two farmers, relatives of the village headman. In one case flood washed out the seed-bed in which these seeds had been started and they were lost. In the other case, the farmer returned twice the amount of seed to the headman at the time of harvest and the headman used the seed himself in the following year. It should be noted that the new breeds were of non-glutinous rice which were not popular to local tastes which preferred glutinous rice for regular consumption.

Water control, at least in the one case, was a more serious problem than genetic constitution. In the other case, the headman wasn't sure what was expected of him in the subsequent disposition of the returned seed.

The headman had not formed a "rice promotion committee" but merely distributed the seed to a relative, close acquaintance or used the seed himself.

The rice officer attributed most of his problems in conducting follow-ups to shortages of personnel and the lack of equipment.

Agriculture Programs

The purpose of the Agriculture Office was the promotion of upland crops. At the district level this was done through the distribution of seed and the holding of lecture meetings for villagers. The seeds distributed within the district were kapok, sesame and corn. Kapok was distributed to the head teachers of three schools. It had been requested by one of the teachers. Kapok seedlings had since been distributed to 80 farmers. Sesame seed was requested by an immigrant to the district who had had particular experience in raising sesame in the place of his previous residence. Twenty-five other farmers had since adopted it. At the suggestion of the provincial agricultural officer sweet corn was introduced at the comprehensive secondary school (a three-year secondary course with both general and vocational subjects taught).

The district agriculture officer visited persons who requested and obtained seeds and offered advice on land preparation and on cultivation techniques. The kapok work had been impaired by a decline in yield believed due to several problems including insect attack, poor soil, and genetic adulteration with local low-yielding varieties. Sesame was becoming more widely grown in the villages into which it was first introduced. The growers were obtaining their seed from the original person who brought it into the area. Corn distribution was just beginning at the

time of the field study. The planting at the comprehensive secondary school failed because of poor timing in relation to the rainy season.

According to the district agriculture officer, he held three or four meetings each year in the 10 communes of the district. During these meetings he discussed the cultivation of cotton, chili pepper, peanuts, and sugar cane.

In two of the villages studied which were, in their turn, sites of such meetings between 100 and 150 people came to hear the district agriculture officer and other officials speak. In both villages the informants volunteered that no one understood the suggested techniques of ground preparation for upland crops. They had no practice in these new techniques nor had they seen them demonstrated.

In two other villages which were in a different commune, the agriculture officer held no promotional meetings although he had visited them on several occasions. For these villages, the main source of agricultural information was the village headman who transmitted instructions received at the monthly meetings at the district headquarters. This was equally true for the crop promotion aspects of the "general economic promotion" program sponsored by the governor.

Cooperative Credit Societies

The key officials of the Cooperatives Office expressed the feeling that the over-all objective of their work was the function of organizing and inspecting cooperative societies. Four marketing cooperatives had been attempted within the province but had not been able to offer terms competitive with the more numerous and aggressive rice millers (who were generally of Chinese stock).

The cooperative credit societies were the most successful undertakings of the Cooperatives Office. The purpose of these societies was to supply operators of small and medium-sized farms with capital to repay old debts, to buy work animals, and to improve their farms with longer term credit of from one to ten years. These societies existed in four of the seven districts of the province. In these four districts there were some 291 societies with over 5,000 formal members.

Part of the work of the officials of the Cooperatives Office at the provincial and district level was the instruction and training of society members in the regulations, by-laws and principles of management of the cooperative.

The societies held two general meetings each year. Both of these were attended by officials of the Cooperatives Office. In addition, the members of each society were supposed to hold about eight meetings annually. In reality they held half that number.

The date of the first general meeting was set by the district cooperatives officer. This was scheduled to take place shortly after the harvest. At this time the officer conducted an income and expenditure survey of the members. A second general meeting was to review the outstanding debt of the members. The members had mortgaged their property to the society and had unlimited liability. At both meetings the officials inquired as to the repayment schedule on loans. The loans were used to clear or acquire land, to purchase livestock, build irrigation facilities and so forth. About half managed to keep up to date on their repayments. Others were asked for an explanation of their tardiness and usually had good and acceptable reasons. Only two people had ever been expelled from societies within the particular district studied. Their failure was

attributed to laziness. However, they were not foreclosed but were forced to withdraw and were given a deadline for repayment. The officials realized that the people would eventually pay because of local attitudes. People, in general, were careful to avoid "trouble" with the government and they didn't want bad relations with the other members.

The officials took exceptional care to see that the financial records of the societies were in order. The district cooperatives officer assumed many of the functions such as checking on collateral, which were supposed to be performed by the general committee of the society. The financial records of each society were audited by an official from the Ministry of Cooperatives (at that time) in Bangkok, and they were given a preliminary audit by officials within the province.

The societies in the villages studied were about five years old. Many societies had not borrowed since the original debt at the time of their establishment. Only about 10 per cent of the membership had put in subsequent requests for new loans. The amounts requested aggregated to less than four per cent of the amount authorized to them for loans within particular periods. The authorizations were based on the existing value of collateral in relation to outstanding debts.

Members of these societies felt that credit was adequate and they expressed approval of the low rates and the availability of long and short term credit. Traditionally, short term loans for consumption and house construction were available locally for 5-10 per cent per month. However, the members of at least one society found credit to be inadequate. They were authorized to borrow 60 per cent of the property value. This was sufficient for the acquiring and clearing of land and for building new houses

but was not sufficient to finance an irrigation system or to purchase several buffalo.

Although the people used the capital they borrowed for its intended purpose and were regarded as having a generally good repayment experience, the cooperatives officials believed that the management of the societies was inadequate.

In reality the management committee did not manage the society. This was done by the supervising officials. They supervised borrowing requests and receipt of repayment, they checked on the status of collateral and set the dates for general meetings during which they conducted financial surveys. They coached the management committees in procedure and conducted preliminary audits of financial records. The societies were in no sense on their own. As evidenced by the amount of outstanding debt, the members did not appear to utilize the credit facilities available. They expressed the feeling that they had the original debt to worry about.

The cooperatives officials felt that factors other than the lack of credit were impairing the incomes of local farmers. The amelioration of these factors was felt to lie within the specialized functional areas of other government agencies. These factors were said to be the lack of technical knowledge of modern agricultural methods, and the irregularity of the water supply.

* * *

From what sources does a Thai farmer learn what he knows about agriculture? He learns from his family. At about eight or ten years of age he tends water buffalo while they graze or bathe. As time passes he helps in transplanting rice seedlings and is taught to work in the garden. Although he has been watching land preparation operations for some years it is not until about between the ages of 13 and 15 that a boy puts his hand to

the plow. In a few years he is reliable and a genuine help. By the time he is 18 a young man can begin farming on his own. Five to ten years of instruction, practice and above all, supervision goes into the making of a subsistence farmer.

The skills of the farmer are the traditionally accepted ones. They are learned by traditional means and they meet present expectations based on past experience. For instance, pests, diseases and water supply problems can be counted on to ravage a significant proportion of a farmer's crops and poultry each year. For a farmer with a desire for a certain level of production, a simple adjustment to these hazards has been worked out. The currently practical solution to a fairly consistent percentage loss each year is to raise that much more rice and garden products and that many more chickens so that the surviving harvest meets the anticipated income level. His skills are in adjustment with his awareness of economic opportunities. Are a few lectures of uncertain quality going to "modernize" him? Is this sufficient to broaden his horizons and change his ways?

In each instance noted here in which these various programs related to agricultural development were made available to villagers, few of the participants came away knowing what the programs were about. However, they did feel that non-participation might in some way lead to trouble. The authority of government officials, and particularly that of the district chief required respectful attention wherever contacts with these officials took place. Yet programs were presented in such a way that villagers generally did not understand the technique of what was to be done nor did they understand what it was that was expected of them. Some of the problem

may be ascribed to weaknesses in the system of basic education available to these farmers.

In the area studied only between a quarter and a third of the children enrolled in the preliminary schools complete the four year sequence. The children who drop out of school generally do so while enrolled in the second or third grade. At the time of their drop-out they can at least read and write and perform simple arithmetic operations. Reading is useful in reading advertisements, receipts and newspapers. Arithmetic is useful in buying and selling. According to informants, the arithmetic got more use than did reading and writing. Those who completed the curriculum have additional benefits. It is said that they have some skills useful in planning life's activities and in guiding their personal behavior. Completion of the fourth year makes a child eligible for secondary school although relatively few go on.

These questions also involve more than intrinsic qualities of entrepreneurship among farmers. Enterprise is also learned by a villager through apprenticeship. A farmer may have the make-up of an entrepreneur but he has to learn the skills of a craftsman, a shopkeeper or a trader from observation or apprenticeship to others. Changing existing methods of farming is apparently a more involved task than governments seem willing or able to face in realistic terms.

As we search for answers to the problems of bringing about agricultural change (and still want to keep from attempting to engineer the entire society and economy from but this one perspective) we should concentrate our attention on the means which will capture the attention of farmers, appeal to their understanding and promote their involvement.

A glaring impediment is posed by the shortages of competent government workers. That is, not only are government agricultural technicians few and far between but such few as exist are generally poorly equipped and motivated, and know little about agriculture, problem-solving or how to transfer knowledge. Such is the case among most other field technicians regardless of their specialty. It is also true of administrative officials who have no service functions to perform.

One way of reducing this shortage is to undertake major investments in the training of an adequate government service. Another is to mobilize, adapt and guide institutions already operating successfully within rural localities.

✓ Local institutions of government are already in existence which perform or facilitate services that meet basic needs among village people. These are among those enumerated earlier in this paper. They interact freely with other public institutions and form part of that complex to which we refer as "rural government." Although the level of operation among these local institutions may be insufficient to bring about desired change, they are amenable to guidance which could, in time, make them competent to share major responsibilities in the development process.

An illustration may serve at this point to indicate the capabilities of such institutions and the kinds of interaction with which they become involved. This case deals with the several phases of the construction of an earthen dam in a village subjected to seasonal floods and drought. It illustrates decision-making, resource mobilization, individual and group action, management by, and public accountability of, local leaders. Although these same processes go on continuously in regard to a variety of activities in rural areas, they are most easily discernible in one of their

forms of most concentrated occurrence, namely public works construction projects. It should be emphasized that, like any individual case, the one discussed here is unique and not a sufficient basis for broad generalization. The illustration relates to agricultural development in that the irregularity of water supply -- flooding and drought -- are major hazards to rice, the basic crop. Public water control projects are frequently associated with purposeful programs of the national government, involving government technicians or officials at one stage or another. A field agency of the national government, the Irrigation Office, is present at the province level. However, its responsibilities are directly concerned with large-scale undertakings. The officials of this agency do, however, advise the governor who is the one responsible for general rural development, including small-scale water control projects.

In this particular rural village there was a stream that was subject to seasonal flash floods and to drought. Four farmers who had lands near the river initiated a project to control its waters. The four men, acting together, planned the original earthen dam that was washed-out and rebuilt in several successive years.

In the first year (1953) these four farmers, who were local merchants as well, collected 6,500 baht (c. \$325)^{6/} from among themselves and 1,300 baht (c. \$65) from among the villagers on a house-to-house canvass. In the second year two of the four men gave 6,000 baht (c. \$300) and collected an additional 1,500 baht (c. \$75) from about 20 other villagers. In the third year two of the four original sponsors of the project gave 7,000 baht

^{6/} The Thai unit of currency is the baht which in 1959 was approximately equivalent to US \$0.05.

(c. \$350) and solicited 1,500 baht (c. \$75) from among the villagers. The money collected was used to hire local labor to move the earth. The laborers provided their own equipment. The rate of payment was five baht per cubic meter (c. \$0.19 per cubic yard).

Each year the dam was washed-out or severely damaged by the flood waters. In later years the four initiators of the project sought advice on improving the design of the dam. Among the local people consulted were the village headman and the head priest of the local Buddhist temple. It was the priest's opinion that the dam needed to be built much higher and thicker than originally planned in order to withstand the flood waters.

The four original farmers, perceiving that the needs were beyond their resources, turned to the village headman asking him to mobilize the entire village to this project. Once the village headman fully understood the project and its requirements he called a meeting of the village people. The ones who attended such meetings were usually the heads of household in the village. Other adult men and women frequently attended as well. Although there was no roll taken and no enforcement of attendance, most people came. The headman explained the project to the villagers and asked them to ratify the general proposal presented to them concerning the construction project. This ratification included agreement as to the size, dimensions and location of the dam.

At this meeting the villagers were also asked to commit themselves to provide labor services or a cash payment in lieu of a labor contribution. These pledges were made publicly and recorded at the time of the open meeting. For those who did not attend, they were either assessed in absentia or approached at their homes for a commitment. The support and involvement of the village families seems to have been necessary for the

success of this or any other activity involving the group as a whole. No matter how autocratic or influential a leader might be, his plans would not succeed if he could not gain accord from the villagers. A great deal of the explanation of the village-wide acceptance of this (or any other project) was based on the reputation and influence of the individual making the proposal (in this case the village headman) rather than on the merits of the specific project. However, knowing the general humor of the local people, the village headman was influenced in the kinds of things that he would propose for local ratification if he was to expect effective cooperation.

The village-wide meetings were also a useful institution for gaining the support of dissenters for projects approved by the majority. Once the ratifying decision was made by the "village assembly," social pressures could be applied against those who would not comply and who did not have an acceptable excuse.

In the years when cash contributions were collected by the four original sponsors of the project, they provided the supervision of the labor. When local contributions of labor (or cash contributions in lieu of labor) were obtained at a village-wide convocation, the village headman, who had summoned the people and commended the project to them, was the one who managed the project.

In the following year, additional funds were needed to complete the dam. A request was made via the Commune Council to the Provincial Council for a sum of 6,000 baht (c. \$300) out of the "rural development funds." Being consistent with the governor's general policies for rural development, the request was granted. Upon allocation of these funds, the district chief appointed a formal committee to supervise the construction and

to account for the funds to his office. The members of the committee were the village headman, the head teacher of the local preliminary school and a layman who was also a resident of the locality and widely respected.

Although this description is only a sketch, it illustrates the interaction of explicit and implicit governing institutions within rural areas. Similar illustrations could be detailed for other areas of public activity. The construction of school buildings and temples, the maintenance of roadways and the planning of festivals rely on similar procedures at the village level.

This case of the construction of the dam involved rural villagers, their formal and informal leaders, commune-level and province-level consultative and legislative bodies, the chief administrators of the district and of the province and their sources of technical advice on rural development matters.

Insofar as these institutionalized structures and their processes have impact within rural localities; insofar as they participate in the management and direction of public affairs, they are part and parcel of rural government. This is relevant to the manner in which the needs of agricultural modernization may be met, a point on which we will concentrate in the concluding section.

We raised questions about actual practice at the beginning of this section. The major areas of service considered were those of education, adaptive research, enhancing the supply of production inputs and the provision of incentives to farmers.

In this section we have examined some illustrative evidence related to these questions. We have seen that farmers develop as apprentices to their

fathers. Formal preliminary schooling grants them some additional capacities in literacy and arithmetic. Government field technicians and administrators attempt to transfer skills relevant to new farming methods to them but generally do so using inappropriate methods with little thought given to the adaptation of the innovation to the requirements of the specific environment and with little thought as to the availability of complementary production resources. Motivations prompting the involvement of farmers in these programs were largely associated with respect for central government authority.

Although some villagers learned marketing skills the national government's efforts on this aspect were modest attempts to establish viable cooperatives. Farmers acquired little knowledge of the ramifications of credit utilization for commercial production, and control over marketing was generally in the hands of agents and millers operating out of commercial centers.

IV. The Changing Relationships Within Rural Government

In an earlier section of this paper we made the point that the only direct access agricultural and other rural development programs had to farmers was through the public institutions included within the concept of "rural government." To review, these included 1) the smallest administrative authority recognized or established by the national government, 2) the representatives of the next administrative echelon higher than the village council or headman (if not an agency of the national government), 3) the representatives of central government agencies operating within rural localities, 4) local organizations or activities promoted by the national government on an "unofficial" or "informal" basis, 5) organizations and activities promoted by the natural power structure (if different from formally recognized authorities), and 6) customary and traditional forms of public action among rural people. These six kinds of institutions include within their scope the entire gamut of public activities within rural localities.

A further point was made that the general activities which these governing institutions could undertake, or facilitate, of direct value to agricultural modernization were 1) education, at the basic level of elementary general knowledge, literacy and simple calculation, and at the higher level of transferring to farmers knowledge of new agricultural techniques, 2) research, which would adapt known agricultural innovations to the special requirements of particular local situations, 3) the supply of production resources not directly under the control of individual farmers, and 4) the development and maintenance of incentives which would encourage farmers to undertake the modernization of their operations.

As was pointed out earlier, many of the obstacles to agricultural modernization have their foundations in fundamental problems affecting the society as a whole. Many of the problems of technological change are beyond the power of solution by field technicians, regardless of their competence. Certain pre-conditions have to exist before the development process can make much headway. An agricultural program is a sterile endeavor if the attention of participants at all levels is numbed or diverted by desperate poverty, disease, ignorance, injustice, political instability or war. Similarly, little headway can be made without facilities for transportation and communication, health and educational services, and the like.

Nations have as their first and primary order of business the stabilization of their international position and of the means for resolving questions of national identity and the distribution of internal power. Central governments might more wisely devote priorities to dealing with the problems which dampen the motivation of underprivileged groups within the country than to embark immediately upon technical improvement programs. Peace and internal security, malaria control, public health immunization, land reform, literacy and general public education rank high among the priorities of government. These may be of greater importance than rural economic development programs since development planning is a higher order activity resting, in part, on many of these pre-conditions.

✓ Major priorities are established at the highest levels of government. If any sense of mission is to be communicated throughout the bureaucracy the real burden is on national policy makers to translate this sense into mobilization of the bureaucracy, into relevant organization and into training appropriate to the responsibilities that will rest on field technicians.

Centralized decision-making is not necessarily inimicable to the progress of meaningful development. The major requirement is that it be relevant and consistent in view of the capabilities of government and the nature of the environment. Top leaders should have at their disposal the means for tailoring development policies to the realistic appraisal of their chances for success. This requires information. Even more basic it requires training and experience in the gathering, interpretation and use of information. Many writers have referred to "dialogue" in government -- to the exchange between the governed and those who govern. A perspective among government officials which focuses on the needs and traits of those at whom their services are aimed; which stimulates and adapts to local reaction; which enlists broad participation and the commitment of local resources, energies and ingenuity is only part of this dialogue.

Regardless of the specific strategy undertaken by the field administration of the national government, initiative, skill and sensitivity make up only part of the story. Experts supported by a central budget cannot adequately meet the total service needs of an entire nation. Resources open to mobilization by the central government make up only a portion of those available for public programs.

The remainder of the dialogue and the additional resources derive from the capacities of rural governing institutions which develop from sources within the community.

In most countries in the early stages of transition to modernization the processes of rural government ramify to a relatively high degree through a variety of endogenous social institutions. As a consequence these institutions take on added roles as implicit governing institutions. Among the six kinds of rural governing institutions some are likely to

have relatively greater importance at different stages of local development than at others. In early stages of transition those institutions based on tradition and the will of the natural power structure are most likely to predominate. In later stages of development the more explicit and clearly differentiated institutions are likely to predominate. These latter include formally established local governing bodies (such as village councils), special-purpose associations and the field representatives of the central government.

Innovative forces prompting this local evolution in rural government are exerted on the community from outside its boundaries. The innovative core of rural government is made up of those institutions which convey or are responsive to such outside pressures.

Elements in the natural power structure, such as competing political associations and absentee landlords may have these qualities and may, by their influence, bring about changes in rural government. Yet, the major potential source of continuing administrative innovation in these areas is through the long-run policies of the central government expressed either in the work of field officials or through special-purpose organizations fostered by the national government.

The remainder of this section is devoted to some speculative explorations concerning the administrative and political evolution of rural governing institutions and the manner in which these may participate in meeting the four generalized areas of need relevant to agricultural modernization, namely, education, adaptive research, input supply and the maintenance of incentives.

Relationships in Early Stages of Development

The basic pattern for local activities in early stages of transition is set by customary procedures and by the will of the natural power structure. Innovative forces commence to have their impact on the locality via 1) elements of the natural social structure with independent contacts beyond the community, 2) field representatives of the technical and administrative branches of the central government, and 3) activities and organizations sponsored by the central government on an informal basis within the locality.

The formally established local governing bodies will probably be authorized a greater diversity of functions than they will be capable of implementing. Among other things, such bodies are called upon to represent the central government to villagers and also to act as the regular channel for expression of village interests to the officials of the central government. This function of liaison is a vital one for it forms a communications link. A closely related function for such institutions is that of acting in lieu of central government officials as an agent following-up either on local projects initiated by field technicians or on regulatory activities of the central government. Since this established body is the legitimate formal local government, it is the intermediary in most transactions between villagers and the central government involving legalistic compliance with standing regulations on topics as diverse as applications for community development assistance, registration of property, census enumeration and the like. Other delegated functions such as deliberation and conciliation are less likely to be performed by this institution than they are to be by the organizations and activities which

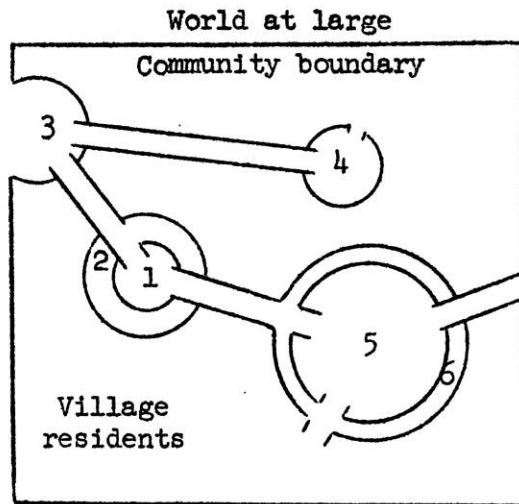
are derived endogenously from the natural social structure or natural power structure.

Figure 2 on the following page illustrates the relationships between these rural governing institutions in the early stages of development. The solid lines represent boundaries. The circular lines represent the institutions themselves and the straight lines represent the channels of interaction between these institutions.

The village council or headman (number 1) exists within the context of the superior local jurisdiction (number 2). These both have direct contacts with central government representatives (number 3) although some of the village council's relations with the central government may nonetheless be channeled through the next higher jurisdiction. The organizations and activities reflecting the natural social structure (number 5) are overlain by customary and traditional procedures (number 6). The village headman or council has contacts with villagers at large either via customary procedures or, through such procedures, via the institutions reflecting the natural social structure.

In these early stages of development the representatives of the central government attempt to foster informal institutions or activities (number 4) aimed at promoting specific kinds of development. Because of generally inadequate knowledge of local characteristics or of particular local needs, these new institutions are not meaningfully related to customary forms of activity or to elements in the local power structure. These new institutions do, however, have some direct contacts with the village people insofar as they participate in, or comply with, the specific programs introduced.

Figure 2. RELATIONSHIPS BETWEEN RURAL GOVERNING INSTITUTIONS IN EARLY STAGES OF DEVELOPMENT



Legend

1. The smallest unit of government formally recognized or established by the central government.
2. The next higher unit of government (if not actually a part of the central government).
3. Field representatives of the central government.
4. Local organizations or activities sponsored by the central government on an "informal" or "unofficial" basis.
5. Local organizations and activities reflecting the community's natural power structure.
6. Customary or traditional forms of activity.

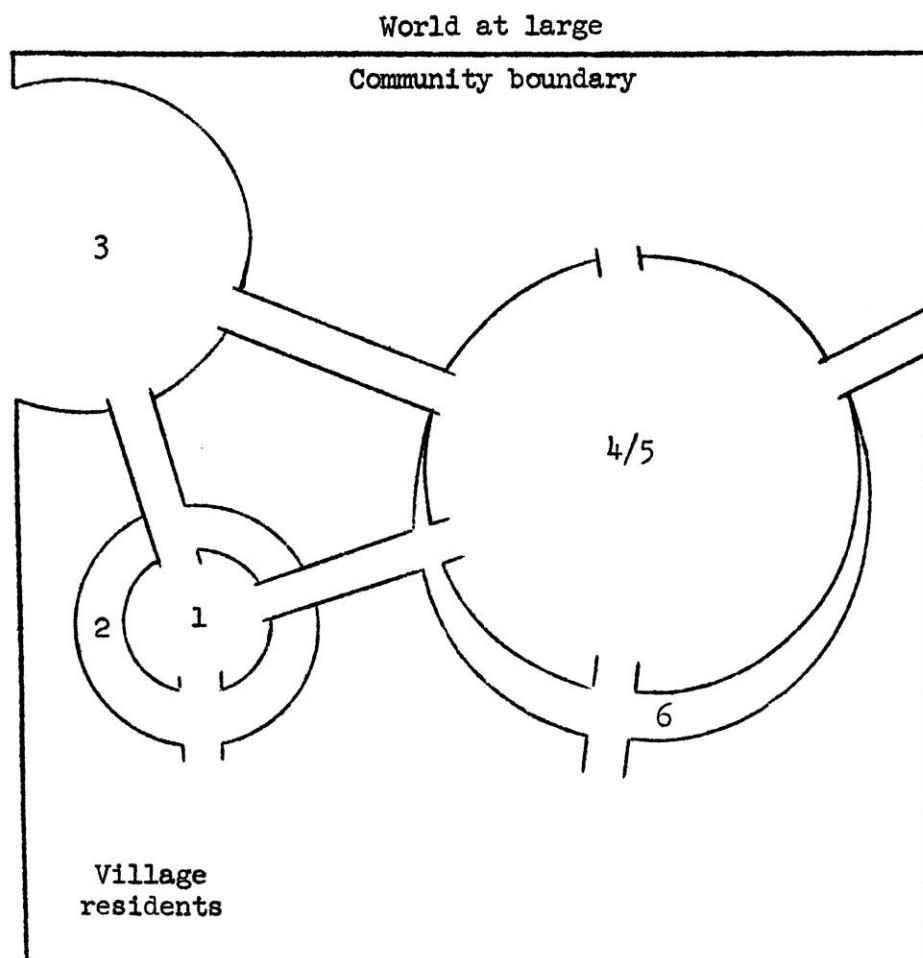
Relationships in Later Stages of Development

The institutions of rural government will see considerable evolution over the period of transition to modernization although it is impossible to predict the course of their changes. However, it is likely that the volume of services performed within rural areas will expand considerably. In later stages of development it is likely that the more explicit institutions will come to predominate in rural government. These explicit institutions are better adapted to meeting general standards and to carrying heavier public service loads. Consequently, they will develop at a faster rate than implicit governing institutions, which themselves may experience modest development.

Probably the most interesting administrative and political developments that take place will involve the evolution of those organizations and activities derived from what we have referred to as the natural power structure or the natural social structure. This covers a diversity of social institutions with roles in managing public affairs, but in general it is likely that these will either 1) withdraw from the mainstream of public affairs and lose their implicit governing roles as the roles of competing governing institutions become more explicit, or 2) meld with organizations and activities promoted by the central government. This melding will take place to the extent that the introduced institutions are assimilated into the social structure of the community and to the extent that they come to reflect the natural power structure.

The diagram in Figure 3 is the latter-day counterpart of Figure 2. It shows the likely relations among rural governing institutions at a relatively advanced stage of development. In Figure 3 several differences are represented over the situation depicted in Figure 2.

Figure 3. RELATIONSHIPS BETWEEN RURAL GOVERNING INSTITUTIONS IN LATER STAGES OF DEVELOPMENT



Legend

1. The smallest unit of government formally recognized or established by the central government.
2. The next higher unit of government (if not actually a part of the central government).
3. Field representatives of the central government.
- 4/5. Informal associations and activities which demonstrate the combined effects of the influence of the central government and of the endogenous social structure.
6. Customary or traditional forms of activity.

The larger dimensions of the diagram represent the larger public service needs of a more developed, marketised and differentiated society even though the area represented is still rural.

At this stage it is no longer possible to make a clear distinction between those institutions which were promoted on an "informal" basis by the central government during its phase of heavy innovation and those institutions which reflect the natural power structure. Consequently, they are depicted as being the same (number 4/5). Some of the included institutions are still overlain by a veneer of traditional or customary forms of activity (number 6) while others may appear to have few vestiges of customary behavior in their operations. The field agencies of the national government (number 3) continue to interact with these institutions (and generally without recourse to traditional forms and procedures). These field agents also continue to interact with the formally established local governing body (number 1). This body continues to exist within the jurisdiction of the next higher unit (number 2), although both these units are likely to undergo considerable development of their administrative sophistication and internal structure. It is also likely that in certain matters this smallest government unit has by this time direct access to villagers at large without recourse to customary procedures or to the organizations and activities derived of the natural power structure.

Which among these rural governing institutions is going to be capable of performing the four general kinds of services we have identified as necessary in meeting the needs of agricultural development? Can a general format be suggested for planning educational services, for adapting innovations to local conditions, for setting up a logistical system for production resources, or for maintaining incentives among farmers to attempt

modernization? Probably not. Form and procedure are matters of local choice in which various traditions, policies and pragmatic decisions will play leading roles.

It is likely that the relevant services will not be parcelled out among the differing kinds of institutions but that the fulfillment of each function will be a joint effort drawing on the specific capacities of each. The form of this joint effort will undergo changes as the participating institutions evolve and as various phases in the transition to modernization are achieved. This poses a serious problem in administration because of the difficulty of bringing about structural adaptations in an administrative unit once it has been formally established.

The qualitative standards of new technology will largely be supervised by central government officials who form the most consistent source of innovative pressures. Because of the likelihood of their relatively greater technical proficiency, representatives of the central government will have major roles to play in guiding educational programs, organizing research work and coordinating activities which offer incentives for the adoption of new practices. Because of the remoteness from the village of many decisions concerning availability of production inputs, central government officials may have parts to play in this phase as well (e.g., planning foreign exchange allocations, domestic fertilizer production, market information, etc.). In addition, central government personnel may render specific services involving specialized resources and highly trained technicians (such as livestock immunizations, bridge construction and the like).

Village people appear to have a greater capacity for association -- either for cooperation or competition -- than they have for the formal

intricacies of law and regulations. They customarily combine for various purposes from celebrations to construction projects or agricultural field work. However, they tend to leave litigation and the interpretation of administrative regulations to others in the community who can explain these matters. Yet villagers in general comprise the group which, as farmers, will be the actual implementers of new programs. Consequently, those special purpose associations and activities which can exploit their sense of community are those which are most likely to capture their attention, and involve them in the modernizing process. Farmers' associations, community development projects, cooperative societies, political groups and even temporary or periodic (yet institutionalized) forms of cooperation may be among these.

It has been pointed out that these institutions have roots both inside and outside of the community. In time, it has been suggested, the associations arising out of the basic social structure and the groups and activities fostered by the central government will blend in their common purpose. Such groups may exchange or share technical information on farming practices, may aid in organizing field trials, in facilitating buying and selling and so forth.

A relatively more stable base for continuity and adaptation may be found in the fluid structure of many of these kinds of groups as they go through evolutionary changes paralleling those in agricultural production.

✓ As a formally established institution, the village council or headman (apart from the concurrent status the individuals or institutions involved may have as part of the natural social structure) may experience difficulty in evolving to meet changing needs. The strongest continuing role such an institution can be expected to play is that of liaison and as an agency for

central government officials, and in the processing of legalistic transactions between villagers and the central government.

Some of the traditional or customary forms of activity may persevere or be adopted as a basis for other evolving institutions. Traditional village assemblies or convocations may continue or become formalized into a regular consultative body. Traditional temporary cooperative work groups may serve as the form and ideal for activities coming under the heading of "community development." The acceptance of the trading functions of some villagers and the protection of their interests may serve as the basis for increasing commercial activity.

Although the recognized unit of formal local government may serve at the head of "rural government," as we have conceived it here, its body and such strength as it will come to have is within the whole village and among those institutions which can work together to focus the outlook and energies of rural people on the elements of the development process.

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